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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,901

03/30/2004

Akihiro Kamemura

51023-018

1318

7590 12/19/2006  
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EXAMINER

PHU, PHUONG M

ART UNIT

PAPER NUMBER

2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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31 DAYS

12/19/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/811,901

Applicant(s)

KAMEMURA ET AL.

Examiner

Phuong Phu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-33 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species:

- Species 1: claims 1-9 and 31-33, drawn to the invention illustrated by figure 1;
- Species 2: claims 12 and 31-33, drawn to the invention illustrated by figure 10;
- Species 3: claims 13-23 and 31-33, drawn to the invention illustrated by figure 12;
- Species 4: claims 24 and 31-33, drawn to the invention illustrated by figure 16; and
- Species 5: claims 25-30 and 31-33, drawn to the invention illustrated by figure 18.

The species are independent or distinct because of the following reasons:

Species 1, at least, distinctly comprises a vehicle mounted device, which includes vehicle reception antennas having different directivities for receiving the waves radiated from road transmission antennas and diversity reception means for performing diversity reception using these vehicle reception antennas, as recites in claim 1, and comprises a vehicle mounted device, which includes vehicle transmission antennas for multiple direction radiation of electromagnetic waves modulated with vehicle data, as recited in claim 7.

Species 2, at least, distinctly comprises a position marker is disposed at or near a road for informing a position on the road at which reception levels of the waves radiated from a plural road transmission antennas are switched, a vehicle mounted device including vehicle reception antennas having different directivities for receiving the waves radiated from the plural road transmission antennas, marker detection means for detecting an arrival of a vehicle at the position marker, and reception means performing any one of the following operations a-c in response to the marker detection means detecting the arrival of the vehicle at the position

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marker: (a) an operation of switching the directivities of the vehicle reception antennas using phase control, (b) an operation of switching or combining the signals received by the vehicle reception antennas, and (c) an operation of switching or combining the codes which were received by the vehicle reception antennas and then decoded, as recited in claim 12.

Species 3, at least, distinctly comprises road transmission antennas each have a specific polarization characteristic and radiate the same cell with the waves carried at the same frequency and containing the same content, and a vehicle mounted device including a plurality of vehicle reception antennas having different polarization for receiving the waves radiated from the road transmission antennas and diversity reception means performing diversity reception using the vehicle reception antennas, as recited in claim 13; and comprises a vehicle mounted device including vehicle transmission antennas with different polarization characteristics for radiating electromagnetic waves modulated with vehicle data, and a plural road reception antennas each have a specific polarization characteristic and are disposed to provide directivity to the same cell, as recited in claim 19.

Species 4, at least, distinctly comprises road transmission antennas being disposed at different places along a road, each antenna having a specific polarization characteristic and radiating the same cell with the waves carried at the same frequency and containing the same content, a position marker being disposed at or near the road for informing a position on the road at which reception levels of the waves radiated from the road transmission antennas are switched, a vehicle mounted device including vehicle reception antennas having different polarization characteristics for receiving the waves radiated from the road transmission antennas, marker detection means for detecting an arrival of the vehicle at the position marker, and

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reception means for performing any one of the following operations a-c in response to the marker detection means detecting the arrival of the vehicle at the position marker: (a) an operation of switching the polarization characteristics of the vehicle reception antennas using phase control; (b) an operation of switching or combining the signals received by the vehicle reception antennas; and (c) an operation of switching or combining the codes which were received by the vehicle reception antennas and then decoded, as recited in claim 24.

Species 5, at least, distinctly comprises road transmission antennas are disposed at different places along a road and each radiate the same cell with OFDM (Orthogonal Frequency Division Multiplex)-modulated wave containing the same content, and a vehicle mounted device including a vehicle reception antenna for receiving the waves radiated from the road transmission antennas, and reception means for demodulating the waves received by the vehicle reception antenna, as recited in claim 25, and comprises a vehicle mounted device including a vehicle transmission antenna for radiating waves which are OFDM (Orthogonal Frequency Division Multiplex)-modulated with vehicle data, as recited in claim 28.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. A telephone call was made to Attorney Steven Becker on 11/20/06 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Phuong Phu*

Phuong Phu

12/01/06

**PHUONG PHU  
PRIMARY EXAMINER**

Phuong Phu  
Primary Examiner  
Art Unit 2611